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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,443

09/28/2006

Jong Woo Lee

4820-022

9055

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EXAMINER

NGUYEN, KHANH TUAN

ART UNIT

PAPER NUMBER

1751

MAIL DATE

DELIVERY MODE

09/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,443

Applicant(s)

LEE ET AL.

Examiner

Khanh T. Nguyen

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1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-9 are currently pending in the instant application.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 09/28/2006 has been regarded by Examiner and made of record in the application file.

Claim Objections

Claims 6 and 9 are objected to because of the following informalities: Claim 6 is objected for inconsistent terminology. Applicant is suggested re-write the claim to recite "The composition of claim 1, wherein said composition comprising of 0.01% to 0.05% by weight of a compound, containing a sulfonic acid as a dopant" or "The composition of claim 1, wherein said composition further comprising of 0.01% to 0.05% by weight of a compound, containing a sulfonic acid as a dopant".

Claim 9 recited "repeatedly dispersing said composition 2 to 10times per 3 to 10minutes" contains spacing error. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai (U.S. Pub. 2006/0006378 A1 hereinafter, "Hirai").

Hirai discloses a composition for forming electrode comprising of a conductive polymer with 10-30 wt. % of water-soluble organic solvent [0100]. The water-soluble organic solvent may be employed alone or in combination selected from primary alcohol having C1 to C5 such as methanol, ethanol, proanol, isopropanol, butanol and pentanol [0150-0151], polyhydric alcohol selected from ethylene glycol, diethylene glycol, triethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, hexanediol, and pentanediol [0150], amides such as formamide, N,N-dimethylformamide, and N,N-dimethylacetamide [0150], and sulfoxide such as dimethylsulfoxide [0150]. The solvent solution contains 30% or more of water [0098]. Hirai also discloses a specific conductive polymer such as PEDOT/PSS (Baytron® P, available from Bayer Corporation) [0140], Baytron® P has a solid content of 1.3 wt. % based on the total weight of solution. The composition may be doped with a sulfonic acid anion [0143]. Hirai further discloses the composition comprising of 0.001 to 1.0 wt. % of a nonionic surfactant [0101, 0152]. The composition also contains 5 to 40 wt. % of nano-sized particles preferably having an average particle diameter of not more than 0.1 micron

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[0161, 0164]. Hirai also discloses a variety of dry coating methods and wet coating methods [0201]. The coating methods of Hirai inherently include spreading out the composition onto a substrate and drying the substrate to form a coating or film on the substrate. Hirai further discloses the substrate may be of glass, plastic film, or polymer materials [0179, 0192] and the coated layer is preferably in the range of 0.5 to 20 micrometer [0176].

However, Hirai does not explicitly disclose the weight percent of individually solvent.

It is within the expected skills of one having ordinary skill in the art to arrive at the optimum proportions of ingredients (i.e. solvent). See *In re Reese*, 129 USPQ 402 (CCPA 1961). It has been held by the court that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F2d 454,456,105 USPQ 233,235 (CCPA 1955). Therefore, Hirai disclosure is considered to read on claims 1-9.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh T. Nguyen whose telephone number is (571) 272-8082. The examiner can normally be reached on Monday-Friday 8:00-5:00 EST PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone

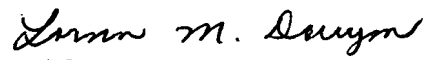
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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



KTN
09/04/2007



LORNA M. DOUYON
PRIMARY EXAMINER